

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Appln. No. 09/587,909

REMARKS

Claims 1-17 have been examined on their merits, and are all the claims presently pending in the application.

1. Claim 1 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Fukasawa et al. (USP 5,715,521) in view of Pandula (USP 5,299,236). The Examiner has agreed that Fukasawa fails to teach or suggest encoding an acquisition signal. However, the Examiner has asserted that Pandula teaches, in a communication system using synchronization, that a code is used to represent a signal, such that the code and signal are different than one another. Applicants respectfully disagree.

a. Fukasawa

As shown in Fig. 1, Fukasawa discloses, *inter alia*, a synchronization signal generator 10 in a first station 1 that generates a synchronization signal A, a first chip code. A spreading modulator 7 generates a second chip code and spreads a data signal by this second chip code, producing a spread-modulated data signal B. During the initial synchronization acquisition phase, only the synchronization signal A is sent to a second station 2, at a first power level. When the second station 2 detects the synchronization signal A, it acquires synchronization and sends a synchronization-acquisition message back to the first station 1. The first station 1 then reduces the power of the synchronization signal A to a second level, and continues sending the synchronization signal A to the second station 2 at this second power level. The first station 1 also begins sending the spread-modulated data signal B to the second station 2, at a third power

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level. A spreading demodulator 15 in the second station generates replicas of the first and second chip codes, uses them to despread the communication signal from a communication channel 3.

b. Pandula

Pandula discloses, *inter alia*, a system for obtaining and maintaining synchronization with an incoming signal, which uses an adequately long pattern to minimize false detection while also keeping the size of the synchronization detecting circuitry to a minimum.

As shown in Fig. 2 of Pandula, an input signal is received via a line 208. The input signal is comprised of “chips” derived from information from a demodulated electromagnetic carrier. A chip comparator 202 compares the chips of the input signal with a reference code via a line 210. The reference code is representative of a portion of an overall pattern indicates that synchronization has been achieved and that data is forthcoming. If the chips received via the input signal on the line 208 match the pattern received via line 210, a chip comparator 202 sends a pattern signal via line 214 to a pattern signal detector 206.

c. Arguments

The Examiner has asserted that the first chip code in Fukasawa teaches the recited acquisition code that is not a CDMA communication code. Applicants respectfully disagree.

In Fukasawa, the first station 1 and the second station 2 communicate over the communication channel 3, using a direct-sequence code-division multiple-access (DC-CDMA) scheme (Fukasawa, col. 2, lines 40-45). The spreading demodulator 15 generates replicas of the first chip code from the first station 1 and the second chip code from the second station 2, uses

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them to despread the communication signal F received from the communication channel 3 (Fukasawa, col. 3, lines 10-12). Although the first chip code is different from the second chip code, and is not used to spread data, there is nothing in Fukasawa indicating that the first chip code is not a CDMA communication code.

In addition, Applicants assert that Pandula is not a proper reference. The present application distinguishes the method disclosed in WO 97/08861, which uses a first time range for transfer of information signals, and a second time range for transfer of acquisition signals. Applicants realized that such a method does not optimally utilize the transmission capacity. Thus, instead of interleaving information and acquisition signals in time, the claimed invention superimposes acquisition signals on the information signal. However, in Pandula, the pattern for synchronization and the data are interleaved in time in the input signal on line 208, and a match of the pattern in the input signal on the line 208 and the pattern in the reference code on the line 210 indicates that synchronization has been achieved and that data is forthcoming (Pandula, col. 2, lines 38-63). Thus, Pandula provides a method that the present application has distinguished, and thus is not a proper reference.

Furthermore, even if Pandula is a proper reference, the combination of Fukasawa and Pandula is improper. The purpose of Fukasawa is to reduce interference and power consumption caused by transmission of synchronization signals, and the focus of Fukasawa is the transmitting station. However, the purpose of Pandula is to reduce the length of the pattern used for synchronization and the size of the synchronization detecting circuitry, and the focus of Pandula is the receiving station. There is no suggestion or motivation to combine the two references.

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From the forgoing, Applicants resubmit the claim 1 is patentable.

2. Claims 2, 3, 5, 8, 10, 16 and 17 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Fukasawa in view of Pandula and further in view of Skinner et al. (USP 5,577,025). As Applicants argued previously in the Rule 111 Amendment filed on October 22, 2004, Skinner does not overcome the deficiencies of the combination of Fukasawa and Pandula. Thus, Applicants resubmit that claims 2, 3, 5, 8, 10, 16 and 17 are patentable.

3. Claims 4 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Fukasawa in view of Pandula and further in view of Schilling et al. (USP 6,061,359). As Applicants argued previously in the Rule 111 Amendment filed on October 22, 2004, Schilling does not overcome the deficiencies of the combination of Fukasawa and Pandula. Thus, Applicants resubmit that claim 4 is patentable.

4. Claims 6 and 11-13 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Fukasawa in view of Pandula and further in view of Skinner and Schilling. As Applicants argued previously in the Rule 111 Amendment filed on October 22, 2004, neither Skinner nor Schilling overcomes the deficiencies of the combination of Fukasawa and Pandula. Thus, Applicants resubmit that claims 6 and 11-13 are patentable.

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5. Claim 7 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Fukasawa in view of Pandula and further in view of Ozluturk et al. (USP 5,841,768). As Applicants argued previously in the Rule 111 Amendment filed on October 22, 2004, Ozluturk does not overcome the deficiencies of the combination of Fukasawa and Pandula. Thus, Applicants resubmit that claim 7 is patentable.

6. Claims 14-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fukasawa in view of Pandula and further in view of Skinner and Ozluturk. As Applicants argued previously in the Rule 111 Amendment filed on October 22, 2004, neither Skinner nor Ozluturk overcomes the deficiencies of the combination of Fukasawa and Pandula. Thus, Applicants resubmit that claims 14-15 are patentable.

7. Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Fukasawa in view of Pandula and further in view of Skinner and Cheng (USP 5,563,883). As Applicants argued previously in the Rule 111 Amendment filed on October 22, 2004, Skinner does not overcome the deficiencies of the combination of Fukasawa and Pandula. Chen discloses, *inter alia*, a method for channel management and signaling, in which the forward and reverse signaling data channels are coupled in different mappings to support terminal grouping. Cheng does not overcome the deficiencies of the combination of Fukasawa and Pandula. Thus, Applicants resubmit that claim 9 is patentable.

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In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number-listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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